

**AMENDMENTS TO THE CLAIMS:**

This list of claims will replace all prior versions, and listings, of claims in the application:

**LISTING OF CLAIMS:**

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- C11
1. (cancelled)
  2. (cancelled)
  3. (cancelled)
  4. (cancelled)
  5. (cancelled)
  6. (cancelled)
  7. (cancelled)
  8. (cancelled)
  9. (cancelled)
  10. (New) A method for interactively manipulating a table comprising the steps of:
    - displaying a table having one or more columns and one or more rows;
    - displaying a first graphical control associated with at least one column or row, the graphical control associated with an operation to be performed on the associated column or row; and
    - selectively hiding by a user the first graphical control.
  11. (New) The method of claim 10 wherein the step of selectively hiding comprises the steps of:
    - displaying a graphical element for hiding the first graphical control; and
    - selecting by the user the graphical element, thereby causing the first graphical control to not be displayed.
  12. (New) The method of claim 11 further comprising the steps of

displaying a graphical element for displaying the first graphical control; and  
selecting by the user the graphical element for displaying, thereby causing the first  
graphical control to be displayed.

13. (New) The method of claim 12 wherein the graphical element for hiding the first  
graphical control and the graphical element for displaying the first graphical control are  
represented by the same graphical element.
14. (New) The method of claim 11 further comprising the step of  
displaying a second graphical control associated with at least one column or row; and  
wherein the graphical element is for hiding the first and second graphical control, and  
the step of selecting the graphical element thereby causes the first and second  
graphical control to not be displayed.
15. (New) The method of claim 14 further comprising the steps of  
displaying a graphical element for displaying the first and second graphical control;  
and  
selecting by the user the graphical element for displaying, thereby causing the first  
and second graphical control to be displayed.
16. (New) The method of claim 10 wherein the step of displaying the table is implemented  
using one or more of HTML, JAVA, and C# .
17. (New) The method of claim 10 wherein the step of selectively hiding is performed by a  
single action.
18. (New) A method for interactively manipulating a table comprising the steps of:  
displaying a table having one or more columns and one or more rows;  
displaying a graphical move control associated with at least one of the columns or  
rows for moving the column or row to a different position;  
selecting by a user the graphical move control;  
identifying by the user the position to which the column or row is to be moved;  
moving the column or row to the identified position; and

displaying the table with the column or row moved to the identified position.

- C11
19. (New) The method of claim 18 comprising visually marking the column or row associated with the selected graphical move control.
  20. (New) The method of claim 18 further comprising the step of displaying MoveTo controls for one or more columns or rows not associated with the selected graphical move control.
  21. (New) The method of claim 20 wherein the graphical move control is associated with one of the columns and each MoveTo control comprises one or more of a left MoveTo control and a right MoveTo control, the left MoveTo control indicating that the selected column is to be moved to the left of the column associated with the left MoveTo control and the right MoveTo control indicating that the selected column is to be moved to the right of the column associated with the right MoveTo control; and wherein the step of identifying comprises selecting one of the left MoveTo controls or the right MoveTo controls.
  22. (New) The method of claim 18 further comprising the step of deselecting the graphical move control.
  23. (New) The method of claim 22 wherein the step of deselecting comprises the steps of displaying a graphical deselect move control associated with the selected column or row for deselecting the selected column or row for moving; and selecting by the user the graphical deselect move control.
  24. (New) The method of claim 23 wherein the graphical move control and the graphical deselect move control are represented by the same graphical control.
  25. (New) The method of claim 23 further comprising the step of hiding MoveTo controls as a result of selecting the graphical deselect move control.

26. (New) The method of claim 25 further comprising the step of removing a visual marking from the selected column or row as a result of selecting the graphical deselect move control.
27. (New) The method of claim 18 wherein the steps of displaying the table are implemented using one or more of HTML, JAVA, and C# .
28. (New) A method for interactively manipulating a table comprising the steps of:  
displaying a table having one or more columns and one or more rows;  
displaying a graphical hide control associated with at least one of the columns or rows for hiding the column or row;  
selecting by a user the graphical hide control;  
displaying the table without displaying the column or row associated with the hide control; and  
replacing the graphical hide control with a graphical reveal control that enables the user to display the hidden column or row.
29. (New) The method of claim 28 wherein the graphical reveal control is displayed in a column or row adjacent to the hidden column or row.
30. (New) The method of claim 29 further comprising the steps of  
rolling a mouse over the graphical reveal control by the user; and  
selectively revealing the identity of the hidden column or row associated with the graphical reveal control.
31. (New) The method of claim 28 wherein the graphical hide control is a '-' icon and the graphical reveal control is a '+' icon.
32. (New) The method of claim 28, further comprising the steps of  
selecting by the user the graphical reveal control; and  
displaying the table with the column or row associated with the reveal control and no longer displaying the reveal control.

- C11
33. (New) The method of claim 28 wherein the steps of displaying the table are implemented using one or more of HTML, JAVA, and C# .
  34. (New) The method of claim 28 wherein the step of selecting the graphical hide control is performed by a single action.
  35. (New) A method for interactively manipulating a table comprising the steps of:
    - displaying a table having one or more columns and one or more rows;
    - displaying a first graphical chart control associated with at least one of the columns or rows for generating a chart for the column or row;
    - selecting by a user the first graphical chart control; and
    - displaying the chart for the column or row.
  36. (New) The method of claim 35 further comprising the step of visually marking the column or row that has been selected for charting.
  37. (New) The method of claim 36 wherein the step of visually marking comprises modifying the displayed first graphical chart control.
  38. (New) The method of claim 37 further comprising the steps of
    - selecting by the user the modified first graphical chart control, thereby closing the displayed chart for the column or row; and
    - modifying the displayed first graphical chart control to indicate that the column or row has not been selected for charting.
  39. (New) The method of claim 35 further comprising the step of deselecting by the user the first graphical chart control, thereby removing the displayed chart for the column or row.
  40. (New) The method of claim 35 further comprising the steps of
    - displaying a second graphical chart control associated with at least one of the columns or rows, different from the column or row associated with the first graphical chart control;
    - selecting by the user the second graphical chart control;

automatically deselecting the first graphical chart control; and  
displaying the chart for the column or row associated with the second graphical chart control and removing the displayed chart associated with the first graphical chart control.

41. (New) The method of claim 40 further comprising the step of  
visually indicating that the column or row associated with the second graphical chart control has been selected for charting; and  
wherein the step of deselecting the first graphical chart control comprises removing the visual indication that the column or row associated with the first graphical chart control has been selected for charting.
42. (New) The method of claim 36 further comprising the steps of  
displaying a second graphical chart control associated with at least one of the columns or rows, different from the column or row associated with the first graphical chart control;  
selecting by the user the second graphical chart control; and  
displaying the chart for the column or row associated with the second graphical chart control, in addition to the chart for the column or row associated with the first graphical chart control.
43. (New) The method of claim 42 further comprising the step of visually indicating that the column or row associated with the second graphical chart control has been selected for charting.
44. (New) The method of claim 42 wherein the chart for the column or row associated with the second graphical chart control is displayed separately from the chart for the column or row associated with the first graphical chart control.
45. (New) The method of claim 42 wherein the chart for the column or row associated with the second graphical chart control is combined with the chart for the column or row associated with the first graphical chart control.

46. (New) The method of claim 35 wherein the chart is a graph.
47. (New) The method of claim 35 wherein the step of displaying the table is implemented using one or more of HTML, JAVA, and C# .
48. (New) The method of claim 35 wherein the step of selecting the first graphical chart control is performed by a single action.
49. (New) A method for interactively manipulating a table comprising the steps of:  
displaying a table having one or more columns and one or more rows;  
displaying a first graphical sort control associated with at least one of the columns or rows for sorting the rows or columns, respectively, of the table in a sort order based on the data in the associated at least one column or row;  
selecting by a user the first graphical sort control;  
displaying a first sort lock control for representing that the sort order of the rows or columns are to be maintained when the data in the associated at least one column or row changes;  
selecting by the user the first sort lock control;  
and  
displaying the table in the sort order and continuing to display the table in the sort order as the data in the associated at least one column or row changes.
50. (New) The method of claim 49 further comprising the step of visually marking the column or row that has been selected for sort locking.
51. (New) The method of claim 50 further comprising the steps of  
deselecting by the user the first sort lock control; and  
discontinuing the display of the table in the sort order as the data in the associated at least one column or row changes.
52. (New) The method of claim 51 further comprising the step of removing the visual indication that the column or row has been selected for sort locking.

53. (New) The method of claim 50 further comprising the steps of  
displaying a second graphical sort control associated with at least one of the columns  
or rows, different from the column or row associated with the first graphical  
sort control, for sorting the rows or columns, respectively, of the table in a sort  
order based on the data in the associated at least one column or row;  
selecting by the user the second graphical sort control;  
automatically deselecting the first graphical sort control and first sort lock control;  
displaying a second sort lock control for causing the sort order of the rows or columns  
to be maintained when the data in the column or row associated with the  
second sort control changes;  
selecting by the user the second sort lock control;  
displaying the table in the sort order associated with the second graphical sort control  
and continuing to display the table in the sort order as the data in the column  
or row associated with the second sort control changes.

54. (New) The method of claim 53 further comprising the step of  
visually indicating that the column or row associated with the second sort lock control  
has been selected for sort locking; and  
wherein the step of deselecting the first sort lock control comprises removing the  
visual indication that the column or row associated with the first sort lock  
control has been selected for sort locking.

55. (New) The method of claim 50 further comprising the steps of  
displaying a second graphical sort control associated with at least one of the columns  
or rows, different from the column or row associated with the first graphical  
sort control, for sorting the rows or columns, respectively, of the table in a sort  
order based on the data in the associated at least one column or row;  
selecting by the user the second graphical sort control;  
displaying a second sort lock control for causing the sort order of the rows or columns  
to be maintained when the data in the column or row associated with the  
second sort control changes;  
selecting by the user the second sort lock control;



displaying the table in the sort order associated with the first and second graphical sort controls and continuing to display the table in the sort order as the data in the columns or rows associated with the first and second sort controls changes.

56. (New) The method of claim 55 further comprising the step of  
visually indicating that the column or row associated with the second sort lock control  
has been selected for sort locking.
57. (New) The method of claim 55 wherein the step of displaying the table in the sort order  
comprises sorting the table first based on the sort order associated with the first graphical  
sort control and then on the sort order associated with the second graphical sort control.
58. (New) The method of claim 55 wherein the step of displaying the table in the sort order  
comprises sorting the table first based on one of the sort orders associated with the first  
and second graphical sort controls, based on the relative positions of the columns or rows  
associated with the first and second graphical sort controls, and then on the sort order  
associated with the other graphical sort control.
59. (New) The method of claim 49 wherein the steps of displaying the table are implemented  
using one or more of HTML, JAVA, and C# .
60. (New) A method for interactively manipulating a table comprising the steps of:  
displaying a table having one or more columns and one or more rows;  
displaying a first graphical aggregation control associated with at least one of the  
columns or rows for aggregating rows or columns, respectively, of the table  
based on aggregation criteria;  
selecting by a user the graphical aggregation control;  
displaying the table in aggregated form such that the rows or columns have been  
aggregated based on the aggregation criteria.
61. (New) The method of claim 60 wherein the step of displaying the table is dynamically  
performed such that the table is displayed in aggregated form as data in the table  
changes.

62. (New) The method of claim 60 further comprising the steps of  
prior to displaying the table in aggregated form, displaying an aggregation control  
panel for specification of the aggregation criteria; and  
entering by the user the aggregation criteria into the control panel.
63. (New) The method of claim 62 wherein the aggregation control panel contains  
aggregation criteria choices for specification of the aggregation criteria.
64. (New) The method of claim 60 wherein the step of displaying the table comprises  
displaying the aggregated column or row as the first column or row, respectively; and  
displaying a graphical drill down control for one or more rows or columns in the first  
column or row, respectively.
65. (New) The method of claim 60 wherein the step of displaying the table comprises  
displaying only columns or rows capable of being aggregated based on the  
aggregation criteria.
66. (New) The method of claim 65 wherein the step of displaying only columns or rows  
displays only columns or rows having a numeric type and displays only derived values  
for those columns or rows.
67. (New) The method of claim 63 wherein the aggregation criteria choices are context  
sensitive.
68. (New) The method of claim 67 wherein the context sensitivity is based on a type of data  
in the column or row associated with the graphical aggregation control.
69. (New) The method of claim 67 wherein the context sensitivity is based on the semantics  
of the column or row associated with the graphical aggregation control.
70. (New) The method of claim 67 wherein the context sensitivity is based on a history of  
past aggregation operations on the column or row associated with the graphical  
aggregation control.

71. (New) The method of claim 68 wherein the column or row associated with the graphical aggregation control contains date data and the aggregation criteria comprises one or more of a week, month, quarter or year.

72. (New) The method of claim 68 wherein the column or row associated with the graphical aggregation control contains text data and the aggregation criteria comprises a regular expression.

73. (New) The method of claim 62 wherein the aggregation criteria comprise range information.

74. (New) The method of claim 60 further comprising the step of visually indicating that the column or row has been selected for aggregation.

75. (New) The method of claim 74 further comprising the steps of  
deselecting by the user the graphical aggregation control; and  
discontinuing the display of the table in the aggregated form.

76. (New) The method of claim 75 further comprising the step of removing the visual indication that the column or row has been selected for aggregation.

77. (New) The method of claim 60 further comprising the steps of  
displaying a second graphical aggregation control associated with at least one of the  
columns or rows, different from the column or row associated with the first  
graphical chart control;  
selecting by the user the second graphical aggregation control;  
automatically deselecting the first graphical aggregation control; and  
displaying the table in aggregated form based on aggregation criteria associated with  
the first graphical aggregation control.

78. (New) The method of claim 60 further comprising the steps of

displaying a second graphical aggregation control associated with at least one of the columns or rows, different from the column or row associated with the first graphical chart control;  
selecting by the user the second graphical aggregation control;  
automatically deselecting the first graphical aggregation control; and  
displaying the table in aggregated form based on aggregation criteria associated with the second graphical aggregation control.

79. (New) The method of claim 78 further comprising the steps of  
prior to displaying the table in aggregated form based on aggregation criteria associated with the second graphical aggregation control, displaying an aggregation control panel associated with the second graphical aggregation control containing aggregation criteria choices for specification of the aggregation criteria; and  
entering by the user the aggregation criteria into the control panel.
80. (New) The method of claim 78 wherein the step of displaying the table in aggregated form based on aggregation criteria associated with the second graphical aggregation control comprises  
displaying the aggregated column or row associated with the second graphical aggregation control as the first column or row, respectively; and  
displaying a graphical drill down control for one or more rows or columns in the first column or row, respectively.
81. (New) The method of claim 80 wherein the step of displaying the table further comprises  
displaying only other columns or rows capable of being aggregated based on the aggregation criteria associated with the second graphical aggregation control.
82. (New) The method of claim 81 wherein the step of displaying only other columns or rows displays only columns or rows having a numeric type and displays only derived values for those columns or rows.

83. (New) The method of claim 60 wherein the steps of displaying the table are implemented using one or more of HTML, JAVA, and C# .
84. (New) The method of claim 60 wherein the step of selecting the graphical aggregation control is performed by a single action.
85. (New) A method for interactively manipulating a table comprising the steps of:  
displaying a table having one or more columns and one or more rows;  
displaying a first graphical filtering control associated with at least one of the columns or rows for filtering the rows and columns, respectively, of the table based on first filtering criteria;  
selecting by a user the graphical filtering control; and  
displaying portions of the table satisfying the filtering criteria.
86. (New) The method of claim 85 further comprising the steps of  
displaying a filtering control panel for specification of filtering criteria; and  
entering by the user filtering criteria.
87. (New) The method of claim 86 wherein the filtering control panel contains filtering criteria choices for specification of filtering criteria.
88. (New) The method of claim 87 wherein the filtering criteria choices are context sensitive.
89. (New) The method of claim 88 wherein the context sensitivity is based on a type of data in the column or row associated with the graphical filtering control.
90. (New) The method of claim 88 wherein the context sensitivity is based on the semantics of the column or row associated with the graphical filtering control.
91. (New) The method of claim 88 wherein the context sensitivity is based on a history of past filtering operations on the column or row associated with the graphical filtering control.

92. (New) The method of claim 85 further comprising the step of visually indicating that the column or row has been selected for filtering.

93. (New) The method of claim 92 further comprising the steps of  
deselecting by the user the graphical filtering control; and  
discontinuing the display of the table in filtered form.

94. (New) The method of claim 93 further comprising the step of removing the visual indication that the column or row has been selected for filtering.

95. (New) The method of claim 85 further comprising the steps of  
displaying a second graphical filtering control associated with at least one of the  
columns or rows, different from the column or row associated with the first  
graphical filtering control, for filtering the rows or columns, respectively, of  
the table based on second filtering criteria; and  
selecting by the user the second graphical filtering control; and  
wherein the step of displaying portions of the table comprises displaying portions of  
the table satisfying the first filtering criteria and the second filtering criteria.

96. (New) The method of claim 88 wherein the column or row associated with the graphical filtering control contains date data and the filtering criteria comprises one or more of a week, month, quarter or year.

97. (New) The method of claim 88 wherein the column or row associated with the graphical filtering control contains text data and the filtering criteria comprises a regular expression.

98. (New) The method of claim 86 wherein the step of entering filtering criteria is performed using a mouse.

99. (New) The method of claim 85 wherein the steps of displaying the table and displaying portions of the table are implemented using one or more of HTML, JAVA, and C# .

- c11
100. (New) A method for interactively manipulating a table having at least two columns and at least one row comprising the steps of:
- displaying one or more columns in the table;
  - displaying a graphical virtual column element associated with at least one of the columns;
  - selecting by a user the graphical virtual column element, thereby making that column a virtual column; and
  - displaying the columns in the table but not the virtual column.
101. (New) The method of claim 100 further comprising the steps of
- selecting by the user the virtual column, thereby making that column a regular column; and
  - displaying the columns in the table including the former virtual column.
102. (New) The method of claim 100 wherein the steps of displaying one or more columns in the table is implemented using one or more of HTML, JAVA, and C# .
103. (New) The method of claim 100 wherein the step of selecting the graphical virtual column element is performed by a single action.
104. (New) A method for interactively manipulating a table having at least two columns and at least one row comprising the steps of:
- designating as a proxy column at least one of the columns in the table, wherein the proxy column is not displayed;
  - displaying one or more graphical controls for the proxy column, each graphical control associated with an operation to be performed on the proxy column;
  - selecting by a user one of the graphical controls; and
  - displaying the result of the operation associated with the selected graphical control.
105. (New) The method of claim 104 wherein the selected graphical control is a graphical sort control for sorting the rows of the table in a sort order based on the data in the proxy column and the step of displaying the result comprises displaying one or more columns of the table, but not the proxy column, in the sort order.

106. (New) The method of claim 104 wherein the selected graphical control is a graphical chart control for generating a chart for the proxy column and the step of displaying the result comprises displaying the chart.

107. (New) The method of claim 104 wherein the selected graphical control is a graphical filter control for filtering the rows of the table based on filtering criteria for the proxy column and the step of displaying the result comprises displaying the filtered rows.

108. (New) The method of claim 104 wherein the selected graphical control is a graphical aggregation control for aggregating the rows of the table based on aggregation criteria for the proxy column and the step of displaying the result comprises displaying the table in aggregated form.

109. (New) The method of claim 104 wherein the step of displaying the result of the operation are implemented using one or more of HTML, JAVA, and C# .

110. (New) The method of claim 104 wherein the step of selecting one of the graphical controls is performed by a single action.

111. (New) A method for interactively manipulating a table comprising the steps of:  
displaying a table having one or more columns and one or more rows; and  
displaying a plurality of graphical controls associated with at least one column or row,  
each graphical control associated with an operation to be performed on the  
associated column or row and at least two of the graphical controls associated  
with distinct types of operations.

112. (New) The method of claim 111 wherein the distinct types of operations include two or more of an aggregate operation, a filter operation, a chart operation, a move operation, a sort operation, a sort lock/unlock operation, and a hide/unhide operation.

113. (New) The method of claim 111 further comprising the step of selecting the graphical controls to be displayed.



114. (New) The method of claim 111 further comprising the step of selecting an arrangement of the displayed graphical controls.
115. (New) The method of claim 111 further comprising the steps of selecting by a user two or more graphical controls for simultaneously performing two or more operations on the columns or rows in the table; and displaying the table in accordance with the two or more operations selected by the user.
116. (New) The method of claim 115 further comprising the step of displaying one or more graphical multi-column or multi-row operation controls.
117. (New) The method of claim 116 wherein the one or more displayed multi-column or multi-row operation controls are each associated with a distinct type of operation that was selected for two or more columns or rows.
118. (New) The method of claim 117 further comprising the steps of selecting one of the multi-column or multi-row operation controls, thereby deselecting the operations of the type associated with the multi-column or multi-row operation control; and displaying the table as it appears without the deselected operations.
119. (New) The method of claim 118 further comprising the step of keeping a history of the deselected operations.
120. (New) The method of claim 119 further comprising the step of selecting previously deselected operations based on the history.
121. (New) The method of claim 115 wherein the selected operations are one or more of a sort operation, a chart operation and a filter operation.
122. (New) The method of claim 117 further comprising the steps of

for each of the two or more columns or rows for which the same distinct type of operation was selected, displaying a graphical control associated with the operation on the column or row;

deselecting the operation for one of the column or rows;

displaying the table as it appears without the deselected operation, while continuing to display the table as it appears when the same distinct type of is applied to other columns or rows for which it was selected.

123. (New) The method of claim 122 wherein the step of deselecting is performed by a single action.

124. (New) The method of claim 111 wherein the table is displayed as part of a web page.

125. (New) The method of claim 124 further comprising manipulating that table by a user through a web-based interface.

126. (New) The method of claim 111 further comprising the steps of displaying one or more cell level override indicators, each associated with a cell in the table, for changing the value in the cell, changing by the user a value in one of the cells having a cell level override indicator; and displaying the table in accordance with selected operations on the table based on the changed value.

127. (New) The method of claim 126 further comprising displaying one or more cell level unoverride indicators, each associate with a previously overridden cell, for reversing overridden values.

128. (New) The method of claim 111 wherein the step of displaying the table is implemented using one or more of HTML, JAVA, and C# .

129. (New) The method of claim 115 further comprising the step of visually marking the columns or rows associated with the selected graphical controls.

130. (New) A method for interactively manipulating a table comprising the steps of:  
displaying a table having one or more columns and one or more rows;  
displaying a graphical control associated with at least one column or row, the  
graphical control associated with an operation to be performed on the  
associated column or row and wherein the operation is dependent on the type  
of data in the column or row; and  
selecting by a user the graphical control, thereby causing the operation for the type of  
data in the column or row to be performed.

131. (New) The method of claim 130 wherein the step of displaying the table is  
implemented using one or more of HTML, JAVA, and C# .

C11  
132. (New) A computer program product for use in conjunction with a computer system,  
the computer program product comprising a computer readable storage medium and a  
computer program mechanism embedded therein, the computer program mechanism  
comprising instructions for:  
displaying a table having one or more columns and one or more rows; and  
displaying a plurality of graphical controls associated with at least one column or row,  
each graphical control associated with an operation to be performed on the  
associated column or row and at least two of the graphical controls associated  
with distinct types of operations.

133. (New) A system for interactively manipulating a table comprising:  
means for displaying a table having one or more columns and one or more rows; and  
means for displaying a plurality of graphical controls associated with at least one  
column or row, each graphical control associated with an operation to be  
performed on the associated column or row and at least two of the graphical  
controls associated with distinct types of operations.

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